AUDIONET

DNC

Digital Network Client

User's Manual

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1 Preface

The Audionet Team congratulates you on your purchase of this unit.

Audionet components are no marketing products, they are authentic. Conceived and developed with scientific inspiration, professional engineering expertise and a passion for achieving the perfect sound. They are unique creations designed to inspire musical enjoyment and have an excellent reputation amongst all connoisseurs throughout the world. Each and every one of our precision-manufactured devices is individually crafted at our Bochum works by our experienced and passionate workforce.

But before you start listening to your new Audionet DNC, please read this manual carefully so you are able to use and enjoy all functions of this unit without drawback on music quality.

1.1 Included

Included you will find the following items:

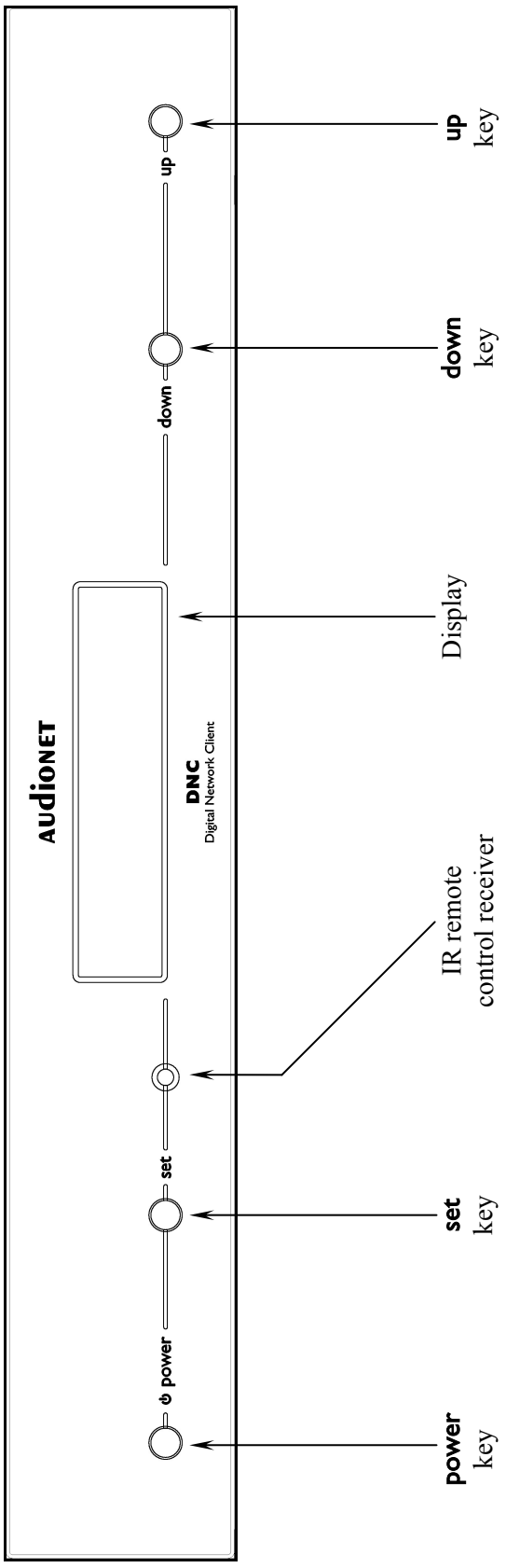
- The network client DNC
- The user's manual
- one standard mains cord
- F-adaptor for FM connection
- WLAN antenna
- Audionet System Remote Control *Harmony One*

1.2 Transport

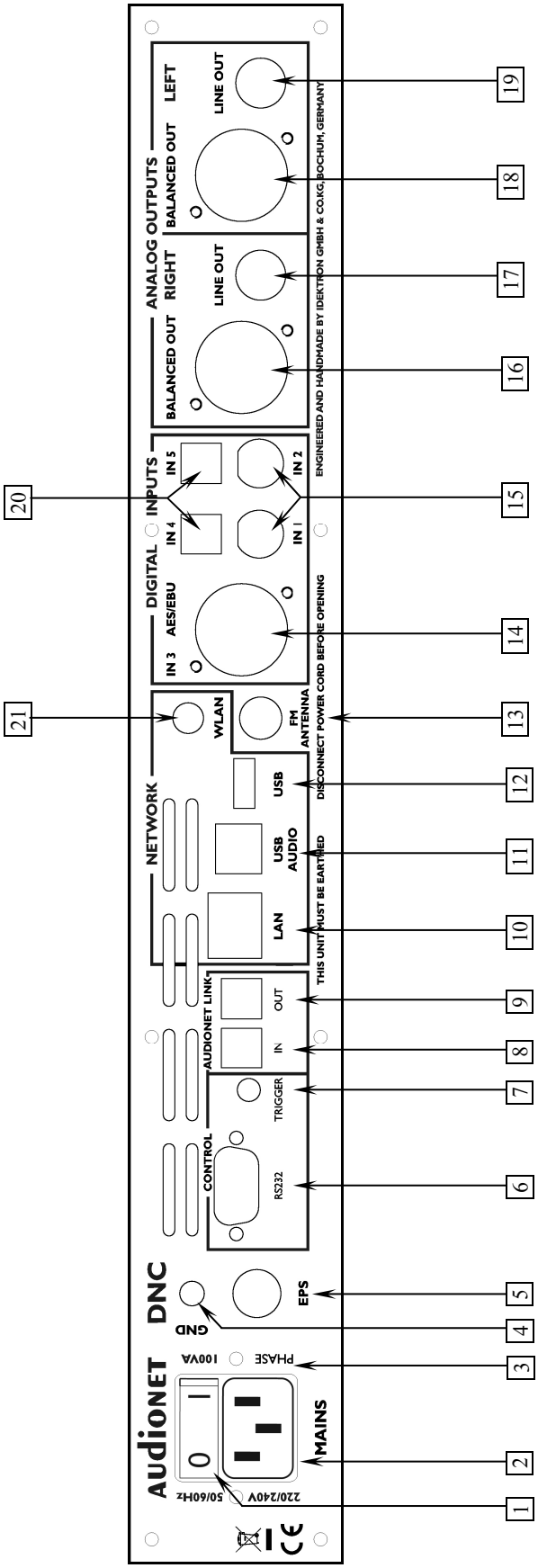
Important

- Please transport the DNC only in the included package.
- Always use the provided cloth bag to prevent scratches on the casing
- Please allow the DNC to adapt to the climatic conditions in your listening room before you switch on the unit for the first time after transport.

2 Overview front panel



3 Overview back panel



1 Mains switch

2 Mains input

3 Marking mains phase

4 additional earth connector

5 5-pin connector for external power supply EPS

6 Serial control port RS232

7 Trigger output (5 or 12 Volt)

8 Audionet Link input **IN**

9 Audionet Link output **OUT**

10 Ethernet connector LAN

11 USB Audio Input

12 USB input

13 FM antenna input

14 Digital input no. 3, AES/EBU (XLR)

15 Digital input no. 1, no. 2, electrical

16 Balanced output (XLR), right

17 Unbalanced output (Cinch), right

18 Balanced output (XLR), left

19 Unbalanced output (Cinch), left

20 Digital input no. 4, no. 5, optical

21 Connector WLAN antenna

4 Installation and power supply

Important

- **During connecting and removing of sources or amplifiers to the DNC all units of your audio system have to be switched off to prevent damage of the DNC or any of the other connected units.**
- **Please make sure that all cables are in absolute best conditions! Broken shields or short-cut cables could damage the DNC and/or any other connected unit.**

4.1 Placement

Important

- It is recommended to place the DNC into a high quality rack or onto a stable table.
- Do not expose the unit to direct sunlight.
- Do not cover the ventilation slots.
- Do not place the DNC in close range to heat sources like radiators.
- Do not place the DNC on top of other units, especially not on top of power amplifiers, preamplifiers or similar devices that produce heat. Both units could suffer damage from thermal overload.
- Do not place other units on top of the DNC. Both units could suffer damage from thermal overload.
- Do not use the unit in places where it is exposed to vibrations.
- Do not place the unit close to loudspeakers or into the corner of a room where it is exposed to high levels of sonic energy, which might reduce the sound quality of the unit.

4.2 Mains connection

The mains input 2* is on the back panel of the DNC. To connect the device to mains use the included mains cord. If you prefer to use a different power cord make sure that it meets the specifications for your home country.

*see numbers in section ***"3 - Overview back panel" on page 10***.

Important

- **The electrical specifications of your home country must meet the electrical specifications printed onto the back panel.**
- The DNC is a Class I unit and must be earthed. Please ensure a stable earth connection. Phase (hot pin) is marked on the back panel **phase** [3].
- If you connect the mains cord please make sure that the mains switch [1] on the back panel is switched off.
- Never pull the mains plug while the DNC is switched on! Before you pull the mains cord off its socket [2] on the back panel, power down the unit to stand-by mode using **power** key, and switch off the unit using mains switch [1].

Only in cases of extended absence – like vacations – or if massive trouble on the mains power grid is to be expected you should switch off the DNC from the mains using mains switch [1]. Then, to disconnect the unit completely from mains power grid, pull the mains plug.

Tip

- The use of high quality mains cords can improve sound quality. Ask your local dealer for more information.

4.3 Orientation of mains plug

The correct polarization of mains is important for reasons of audio clarity and stability. Please connect the mains cord so that the hot pin of the wall outlet is connected to the pin of the mains input [2] marked **phase** [3]. Your Audionet DNC is able to detect a wrong polarization of the mains plug during start-up. If the message

```
►       Attention:       ◄
► Mains phase incorrect  ◄
```

appears in the display, switch off the unit and flip the mains plug in the wall outlet (see section ***"6.1.3 - Mains phase detection" on page 20***).

5 Inputs and outputs

Important

- **During connecting and removing sources or amplifiers to the DNC all units of your audio system have to be switched off to prevent damage of the DNC or any of the other connected units.**
- **Please make sure that all cables are in absolute best conditions! Broken shields or short-cut cables could damage the DNC and/or any other connected unit.**

5.1 Audio inputs

5.1.1 Digital input

Connect your digital sources to the electrical (coaxial) digital input **IN 1** and **IN 2** [15]* or to the optical (TosLink) digital input **IN 4** and **IN 5** [20]. In addition, there is a XLR socket **IN 3 AES/EBU** [14] for connecting AES/EBU input signals.

5.1.1.1 Audionet HighBit input

In order to send audio data across the Audionet HighBit interface to your DNC, connect your source device (e.g. ART G3 or VIP G3) with **two** digital cords to the digital inputs **IN 1** and **IN 2**.

The following table shows how to connect Audionet HighBit-capable devices to the DNC:

Audionet HighBit			
Devices	**Output**		**DNC Input**
VIP G3	Digital OUT 1	→	Digital IN1
	Digital OUT 2	→	Digital IN2
ART G3	Digital OUT 1	→	Digital IN1
	Digital OUT 2	→	Digital IN2

Important

- Only if **both** connections are established and Audionet HighBit mode is activated on your source device, you can transmit audio data with all sampling rates and full resolution.

*see number in section *"3 - Overview back panel" on page 10*.

Note

- Check the corresponding section in user's manual for Audionet ART or VIP. User's manuals are available for download on our website *www.audionet.de*.

5.2 Audio output

The DNC is equipped with two pairs of analog outputs: **BALANCED OUT** 16 and **LINE OUT** 17 for the right channel, and **BALANCED OUT** 18 and **LINE OUT** 19 for the left channel.

5.3 Other connections

5.3.1 Network, USB, WLAN

The Ethernet port **LAN** 10 is a standard RJ45 socket for network cables (Cat-cable, 10/100 Mbit BASE-T).
The WLAN port **WLAN** 21 uses a SMA connection to attach the provided WLAN antenna. With the articulated joint the antenna can be turned into two directions.

The USB port **USB** 12 is a TYPE-A socket (USB 2.0) for external hard drive, USB sticks, iPod, iPad etc.

Note

- We recommend using a wired network connection for best data transfer rate and to provide high stability in control with our software.

5.3.2 USB Audio

The USB Audio port **USB AUDIO** 11 is a USB TYPE-B-socket. With the USB Audio connection you are able to connect your DNC with a USB cable directly to a PC. Thus you can use your DNC as the sound device / playback device for your PC. Playback operates in asynchronous mode, that means the DNC uses its own clock and you are able to enjoy your music without diminishing sound quality.

For using USB Audio the required driver needs to be installed on your PC. For Apple devices using Mac OS X 10.6.4 and higher a suitable driver is included within the operating system. To receive the driver for Windows based systems please contact us via *service@audionet.de*.

Note

- The driver is packed into a zip-file. To install the driver unpack the zip-file into a folder of your choice. Then open the chosen folder and start the installation process executing the file *setup.exe*.

- During the installation process all occurring security warnings can be confirmed with 'OK'.
- During the installation process your Audionet device has to be connected with your PC via an USB cable.
- After successful installation you can choose your DNC as the sound device / playback device of your PC. For configuration open the system preferences of your PC.
- Pay attention to the length of the USB cable. If the cable is too long you might diminish sound quality and / or experience dropouts during playback.

5.3.3 FM Antenna Connection

Your device has an F-series connector [13] for antenna connection. An adaptor to coaxial socket is delivered separately. This port is specified for 75 Ohm FM antenna or analog cable TV connection.

5.3.4 Audionet Link

For your convenience, the DNC can be switched on/off by other Audionet units (e.g. power amplifiers) connected via Audionet Link by a simple touch on the remote control or the **power** key on the front panel.

You only need a simple optical TosLink cable. Connect the Audionet Link input **Link IN** [8] of your DNC to the Audionet Link output of the controlling unit.

The DNC is equipped with an Audionet Link input **Link IN** [8] and an Audionet Link output **Link OUT** [9]. The DNC is a slave device. Connect the Audionet master device to **Link IN** [8], other Audionet slave devices can be connected to **Link OUT** [9]. Thus the switching signal will be passed along.

Tip

- Audionet source units and power amplifiers are usually equipped not only with an Audionet Link input, but additionally with an Audionet Link output to connect further Audionet devices to be controlled via Audionet Link in a daisy chain. Connect this Audionet Link output to the Audionet Link input of the next Audionet unit using a simple optical TosLink cable allowing you to switch on/off your complete Audionet system by your Audionet master unit.

Important

- For the DNC to be controlled via Audionet Link, menu item **`Power-off mode`** within the **`Global Setup`** menu has to be set to **`Quick Start`** (see section ***8.2.3 - Power-off mode on page 39***).

5.3.5 External power supply EPS G2

In order to use the optional external power supply Audionet EPS G2 (External Power Supply) connect it with delivered cable to equal socket **EPS** 5 on the back panel of your DNC. Connect **both** (!!) **units** (DNC and EPS G2) to mains. First, switch on the EPS on its back panel. Then switch on the DNC with the mains switch 1. Now the DNC is ready to use (stand by mode).

Switch on the DNC with the **power** key on the front panel or keys **Power On** or **Power Toggle** of the Audionet System Remote Control *Harmony One*. The Audionet EPS G2 will then be automatically switched on time-delayed.

To disconnect the DNC and EPS G2 from mains, switch the DNC into stand-by mode. Use the **power** key on the front panel or the keys **Power Off** or **Power Toggle** on the system remote control. First, switch off the DNC with the mains switch 8 on the back panel, and then switch off the EPS G2. Now you can disconnect the mains and EPS G2 connection cables.

Important

- **Never switch on or off the EPS G2 on its back panel while the DNC is operating!**
- **The DNC is only to be used with EPS G2 from serial number 12.23.10 on up. For EPS or EPS G2 with older serial numbers there is no guarantee for proper functionality!**
- **Before using the DNC in combination with the external power supply EPS G2 please read the user's manual of the EPS G2 carefully!**

5.3.6 Additional earth connection

An optional green-yellow cord for the additional earth connection is available from Audionet. Attach this cord to the earth connector 4 on the back panel of the DNC and put the plug into the mains socket right beside the mains cord of your DNC. This ensures an additional and stable earth connection resulting in a better sound.

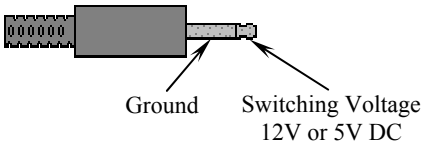
5.3.7 Control connections

Use trigger output **TRIGGER** 7 to control (e.g. switch on/off) non Audionet devices. If you switch on the DNC from stand-by mode, the trigger output 7 provides a signal of 12 Volts DC (see section ***"8.2.6 - Trigger out" on page 41***), which can be re-configured to 5 Volts DC.

The serial connection **RS232** 6 is an additional control port to your DNC e.g. for house automation systems (Crestron or the like).

Tip

- Use a 3.5 mm telephone mono plug to connect a device to the trigger output 15 of your DNC. The pinning is as follows:



6 Usage

All functions of the DNC are microprocessor controlled. This guarantees highest precision, exclusive functions, easy handling and protection against operating errors.

6.1 Basic operations

6.1.1 Powering up

First of all, please make sure your DNC is connected correctly to your signal sources, preamplifier(s) and mains (see section ***"4 - Installation and power supply" on page 11*** and ***"5 - Inputs and outputs" on page 13***).

The DNC is a stand-by unit. Please operate the mains switch [1] on the back panel. The display shows a welcome message for a brief moment. After that the DNC is in stand-by mode.

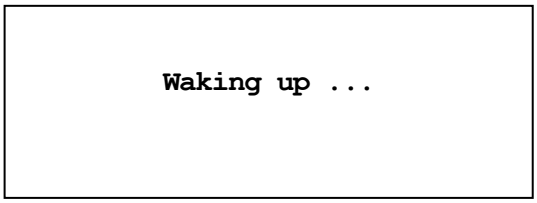
Only in cases of extended absence (like vacations) or if massive trouble on the mains power is to be expected (e.g. thunder storms) it is recommended to disconnect the DNC from the mains. While the DNC is in stand-by mode, operate mains switch [1] on the back panel. The display will go dark. To disconnect the DNC from mains completely, you have to pull the mains cord off the mains jack [2].

Important

- **Before you switch off the DNC from mains, power down and discharge completely all units connected to the outputs of the DNC.**

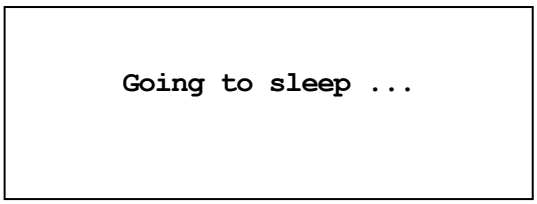
6.1.2 Switching on and off

To power up the DNC from stand-by mode, press the **power** key on the front panel. The DNC issues the message:



In case the mains plug has the incorrect polarization a warning will appear in the display (see section ***"4.3 Orientation of mains plug" on page 12***). After that the unit is in normal operating mode and ready to use.

If you would like to switch off the unit, please press the **power** key on the front panel. The display shows the message



and the unit enters stand-by mode.

Note

- Of course, you may switch on/off the DNC with the Audionet System Remote Control *Harmony One*. For detailed information please refer to section ***"7.5 - Screen 4" on page 34***.

6.1.3 Mains phase detection

The correct polarization of mains is important for reasons of audio clarity and stability. Please connect the mains cord with the hot pin of the wall outlet to the pin marked **phase** [3] of the mains input [2] on the back panel. The DNC recognizes the incorrect polarization of the mains plug automatically. Right after switching on the unit from stand-by mode by pressing the **power** key on the front panel the following message will appear in the display in case the mains polarization is incorrect:

```
►        Attention:       ◄
►  Mains phase incorrect  ◄
```

If you are alerted by the above message, switch off the unit by pressing the **power** key. Please wait until the display no longer reads:

```
      Going to sleep ...
```

Disconnect the DNC from mains by operating the mains switch [1]. Now pull the mains plug and re-insert it into the mains socket rotated by 180°.

If you switch on the unit again, the warning should not appear now.

Important

- If the DNC issues the mains polarization warning or no warning at all for both positions of the mains plug, check the connection to earth of your mains socket and mains cord. **You have to ensure a stable connection to earth for the mains phase detection of the DNC to work correctly!**

6.1.4 Using Audionet Link

The DNC is equipped with an Audionet Link input **Link IN** [8] and an Audionet Link output **Link OUT** [9] allowing you to connect further Audionet units (e.g. preamplifiers, power amplifiers or CD player) via Audionet Link (also see section ***"5.3.4 - Audionet Link" on page 15***).

If the rest of your Audionet system is connected to your DNC via Audionet Link, all forth following linked units will be automatically switched on/off as soon as the DNC itself is switched on/off via **Link IN** [8].

Note

- Please read section ***"5.3.4 - Audionet Link" on page 15***. Also, consult the user's manual of your Audionet components connected via Audionet Link for further information.
- If you use Audionet Link to switch off other devices, please wait until everything is in stand-by mode before you switch on again.

Important

- For the DNC to be controlled via Audionet Link, menu item **`Power-off mode`** within the **`Global Setup`** menu has to be set to **`Quick Start`** (see section ***8.2.3 - Power-off mode on page 39***).

6.1.5 Control elements on the front panel

The front panel has four keys to control the DNC (see section ***"2 - Overview front panel" on page 9***). With these keys you can control all functions as well as all setup options to adjust the unit to your preferences (see section ***"8 - Device setup" on page 35***).

power Use key to switch on/off the unit (see section ***"6.1.2 - Switching on and off" on page 19***).

set Push key shortly to change input channel (see section ***"6.2.2 - Input selection" on page 25***). Within a menu press shortly to open a subfolder or to confirm and save an adjustment.
Push the key for longer than two seconds to get into system menu (see section ***"8 - Device setup" on page 35***). Within a menu press long to step back and open the superior folder or to dismiss an adjustment without saving.

down Push key to select previous input channel (see section ***"6.2.2 - Input selection" on page 25***) or change an option of the setup menu (see section ***"8 - Device setup" on page 35***).

up Push key to select next input channel (see section ***"6.2.2 - Input selection" on page 25***) or change an option of the setup menu (see section ***"8 - Device setup" on page 35***).

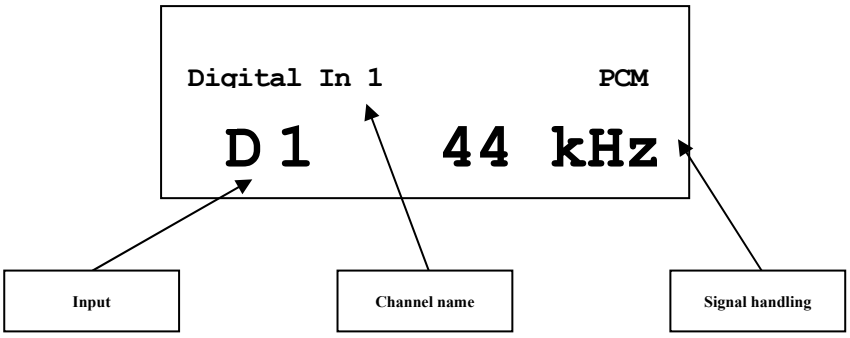
6.2 Detail operations

6.2.1 Display

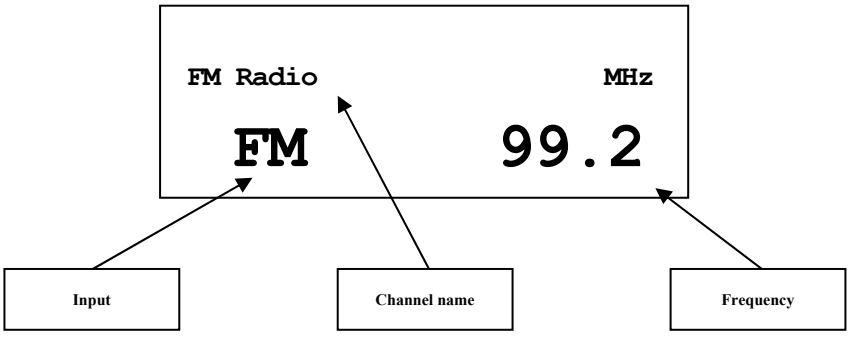
The display provides the following information in the normal operating mode.

Depending on which channel you chose, you get different information. If there is more information to show you can switch display pages with the **Info** key on system remote control *Harmony One* (see section ***"7.1 - Key assignment DNC" on page 31***). You will need it especially for the NET input channel (see section ***"6.2.1.3 - NET input" on page 23***). The following illustrations will show you the differences between the input channels. Your display could be different, because of your selected system adjustments.

6.2.1.1 Digital input channel

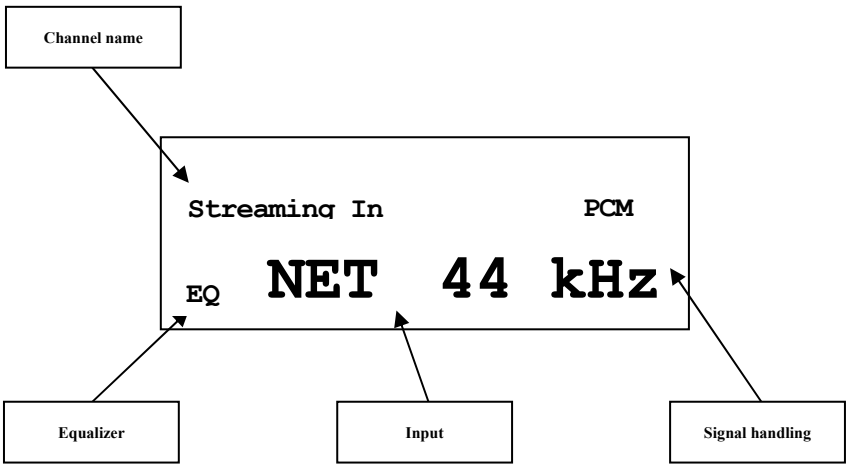


6.2.1.2 FM tuner

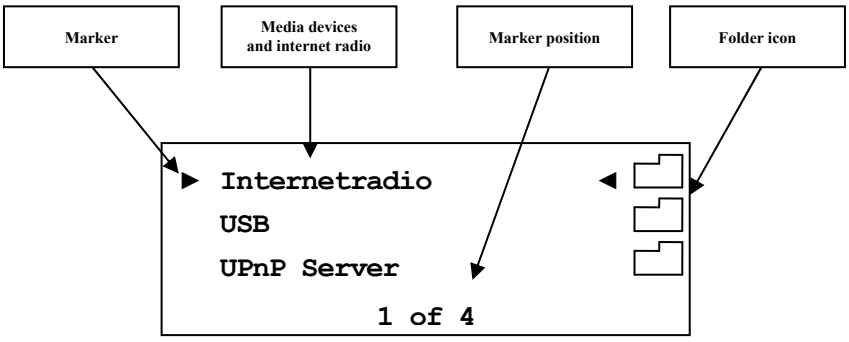


6.2.1.3 NET input

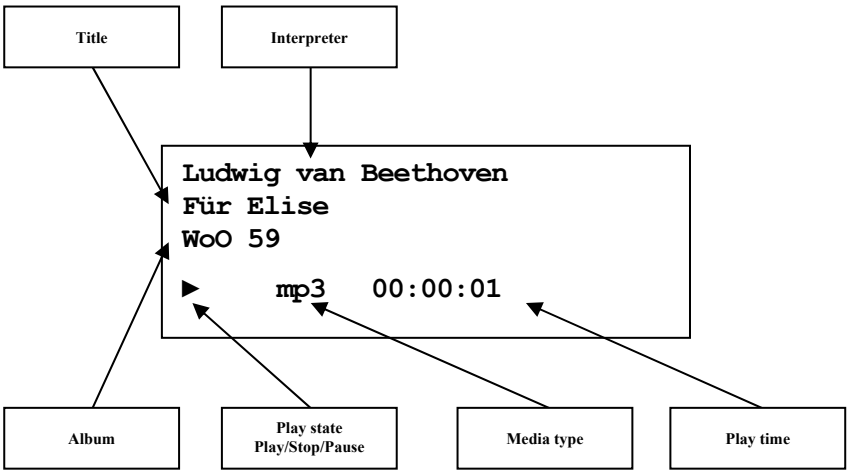
- View 1:



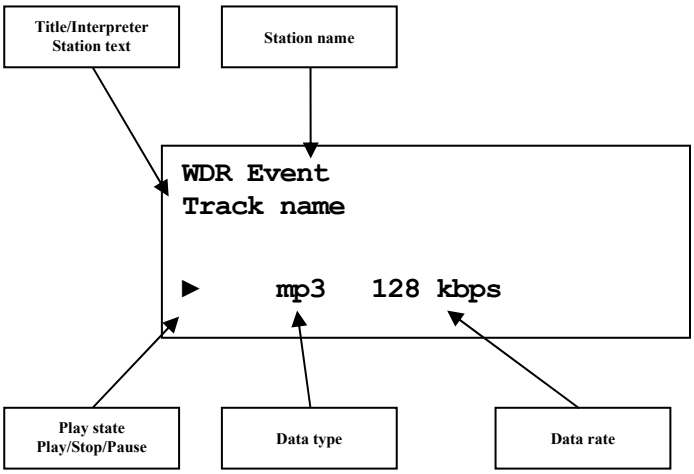
- View 2:



- View 3a (Play from UPnP or USB):



- View 3b (Play from internet radio station):



6.2.2 Input selection

Push the **set** key on the front panel once for less than two seconds to enter the input selection menu. Then select the desired input channel with the keys **up** and **down**. In the display you see the selected input channel, channel number and your chosen channel name. Press **set** to apply the channel switching. Overview of DNC input channels:

No.	Inputs	Signal	see *3 - Overview back panel on page 10*
1	D1	Digital (electrical)	Digital Inputs IN 1 [15]
2	D2	Digital (electrical)	Digital Inputs IN 2 [15]
3	D3	Digital (AES/EBU)	Digital Inputs IN 3 [14]
4	D4	Digital (optical)	Digital Inputs IN 5 [20]
5	D5	Digital (optical)	Digital Inputs IN 6 [20]
6	NET	Stream, USB, Internet radio	Network [10] [12] [21]
7	USB	USB Audio In	USB Audio [11]
8	FM	FM Tuner	FM Antenna [13]

While switching of inputs, the outputs are switched off at first. Once an input is selected, the outputs are switched on again.

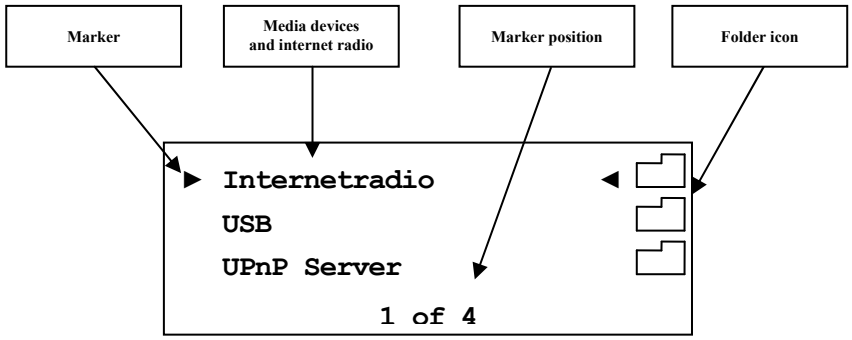
Note

- Leave the input selection function by holding down the **set** key longer than 2 seconds or wait a few seconds.
- Using the Audionet System Remote Control *Harmony One*, select an input channel by simply pressing the corresponding key, or use the keys **Ch+** and **Ch-** to switch to the next or previous input channel without using the **`Select Input`** function.

6.2.3 FM tuner

For setting and saving radio stations to your DNC, please use the software Audionet RCP (see chapter ***"7 - FM-Tuner" on page 23*** in RCP user's manual). You can also setup your radio station frequency manually with your remote control. Use the keys of the Audionet System Remote Control *Harmony One* (see section ***"7.1 - Key assignment DNC" on page 31***). Use keys Page Up / Page Down to change frequency manually. Use keys up / down of the directional pad to change presets, press keys left / right to start an automatic station scan.

6.2.4 NET input



6.2.4.1 Internet radio

With the internet radio service *vTuner* it is possible to select your favourite radio stations from a steadily growing number of worldwide stations. You have to register with an account at *vTuner* to save your favourite stations and to receive personalized recommendations. Beforehand a stable network environment should be set up for your Audionet device (see section ***"8.3 - Network setup" on page 43***).

To register an account, open the website *http://audionet.vtuner.com*. You will be going to visit this address every time you wish to edit your favourite radio stations. As long as you do not have registered an account with your Audionet device, you have to click on *Register Here* right below the login. Additionally you will be requested to enter your E-Mail address, to choose a personal passphrase and to enter an access code. There a two possibilities to spot your access code. With the system remote control *Harmony One* select the NET input. Select the first menu item **`Internet Radio`** (**`1 of 5`**) using **OK** key. Navigate to menu entry **`Get Access Code`** (**`13 of 14`**). Confirm with **OK**. Your access code consists of eight digits and is now shown in line 3 (**`3 of 3`**). Note down this code and enter it in the registration window within your browser.

6.2.4.4 UPnP server

The easiest way to play music from an UPnP server is to use the software Audionet RCP or Android App aMM.

Note

- Look out for separately available user's manual to our software Audionet RCP. You can find it on our website *www.audionet.de*.

If you want to use your System Remote Control *Harmony One*, it is the same way to navigate through as shown above in section internet radio and USB.

6.2.5 USB Audio

The USB Audio connection allows a direct connection of your DNC to your PC. Audio files can then be played with your favorite software. The DNC serves as sound device / playback device.
For further information see section ***"5.3.2 - USB Audio" on page 14***.

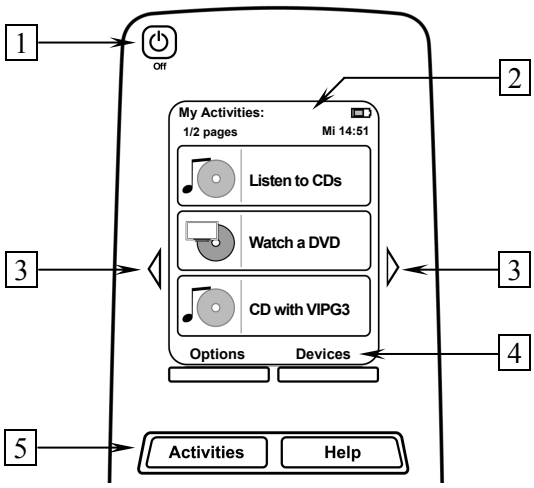
7 Audionet system remote control

Every function of the DNC is accessible via the Audionet system remote control *Harmony One*. Additionally, up to 14 other devices can be controlled by the *Harmony One*.

Press **Devices** key to enter **Device Mode**. The display now lists all devices included in the current configuration of the *Harmony One*. Select **DNC** from the list to set the *Harmony One* to controlling the DNC. The **Device Mode** gives you access to all the possible commands to control your DNC. The following explains all these commands in detail.

Important

- During everyday use, you should never need to use the Device Mode of your Harmony One, but control the DNC (and other devices of your audio setup) by customizing your Activities. For detailed information on how to customize and use Activities on your *Harmony One* please consult the separate user's manual for *Harmony One*. It is available for download on our website *www.audionet.de*.



1. **Power** key for use with Activities, turns all devices off that are included into the current Activity. See separate user's manual for *Harmony One*.
2. Depending on the operational mode, the touch screen of the *Harmony One* shows a list of Activities or Devices, help or infrared commands and any available listings.
3. If a menu or listing stretches over more than one screen page, use the corresponding arrow buttons to go to the next or previous page of the menu or listing (see also separate user's manual for *Harmony One*).
4. **Devices** key, lists all the devices on the display, and allows you to select and directly control any device included in the configuration of the remote control (see separate user's manual for *Harmony One*). Select **DNC** to enter **Device Mode** for controlling the DNC.

5. **Activities** key: Press this key to view a list of Activities you have added. Press the button next to the Activity you want to select, and the *Harmony One* will control your entertainment system (see separate user's manual of *Harmony One*).

Important

- **The Power key is only available for Activities. In Device Mode the Power key has no function.**
- **Even without using an Activity, the user is able to control all functions of the DNC using the *Harmony One* in Device Mode.**
- **The keys described below to control the DNC refer to the factory default programming of the Audionet System Remote Control Harmony One. Understandably, any changes done to this setup by the user cannot be discussed here.**

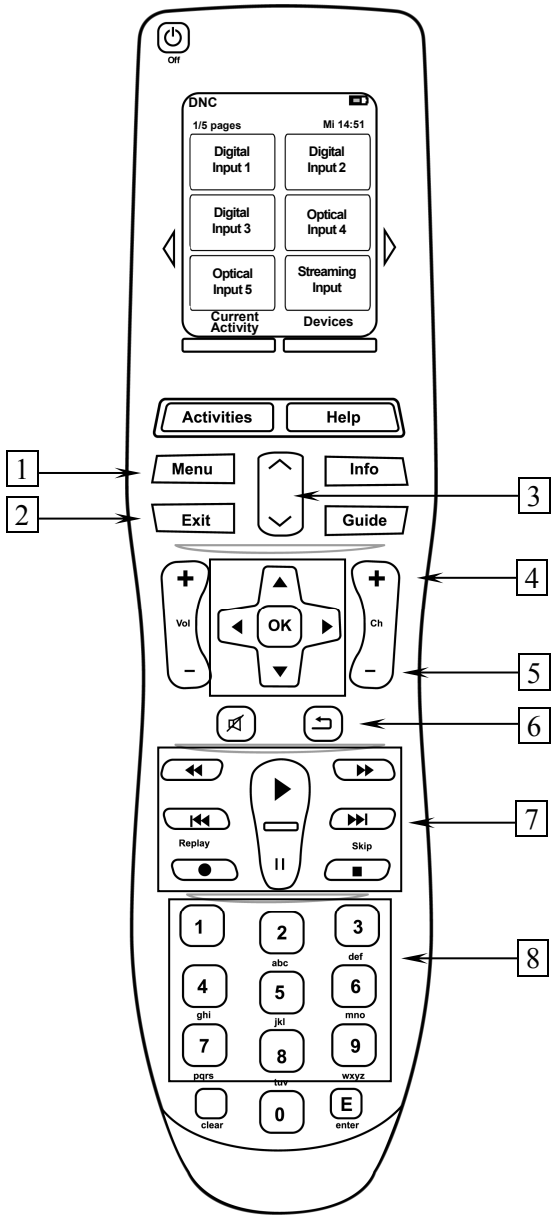
Tip

- In order to switch the DNC on/off, without using an Activity, please use the keys **Power On**, **Power Off** or **Power Toggle** on screen 4 (see section ***"7.5 - Screen 4" on page 34***). Of course, it is possible to control the DNC without any Activity, but to tap the full potential of the *Harmony One* you need to configure Activities customized to your needs (please refer to separate manual of the remote control Harmony One).

Note

- Please read the separate user's manual to your Audionet System Remote Control *Harmony One*. Activities, Devices and Device Mode as well as customizing the remote control are discussed there. It is available for download on our website *www.audionet.de*.

7.1 Key assignment DNC



1 Use **Menu** key to navigate through the setup menus. This key has the same function as **set** key on the front panel (see section ***"8.2 - Global setup" on page 37***).

2 **Exit** leaves every menu to go back to main screen. If you are in a submenu of the NET input you will get to the top level.

3 **Page up/down**. With this key you can switch three files or folders forward/backward. The key is activated only if you select NET input (Internet radio, UPnP play, USB and iPod).

4 **Ch+** switches to the next input channel (see section ***"6.2.2 - Input selection " on page 25***).

5 Ch- switches to the previous input channel (see section *"6.2.2 - Input selection " on page 25*).

6 **Cancel** to step back in menu, without saving any changes

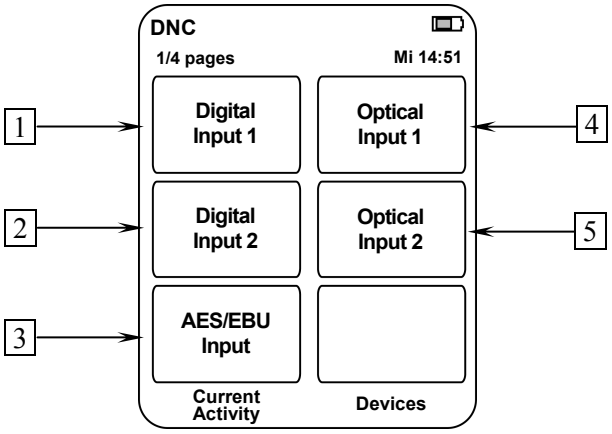
7 **Player keys** for controlling media content if you chose NET input.

8 **Numeric keys** are used for input of numbers or letters (SMS principle) if the menu item supports direct letter input.

Note

- To navigate backwards in menu use **Cancel** 6, or leave the setup menu using **Exit** 2.

7.2 Screen 1



1 Directly selects input channel **D1** (coaxial).

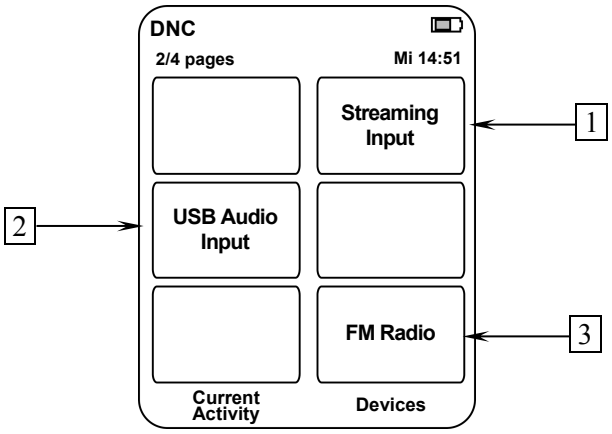
2 Directly selects input channel **D2** (coaxial).

3 Directly selects input channel **D3** (AES/EBU).

4 Directly selects input channel **D4** (optical).

5 Directly selects input channel **D5** (optical).

7.3 Screen 2

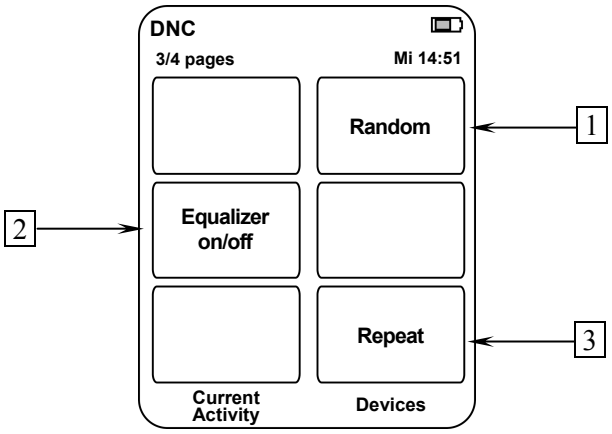


1 Directly selects input channel **NET** (streaming input). This input channel allows you to access internet radio stations, USB devices, iPod and UPnP server (if they are connected).

2 Directly selects input channel **USB** (USB Audio In).

3 Directly selects input channel FM radio.

7.4 Screen 3

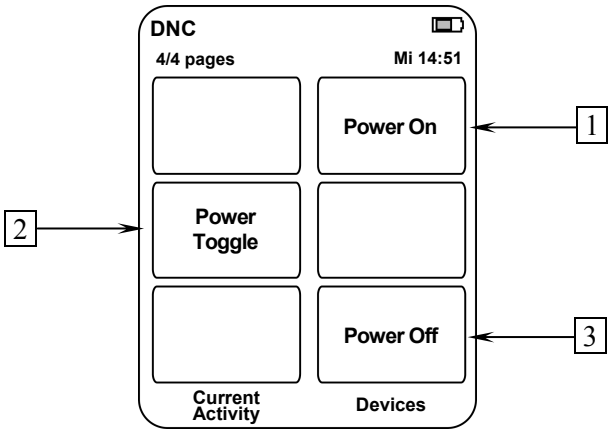


1 **Random** activates random play from selected folder (activated only with NET input).

2 **Equalizer on/off** switches on/off the equalizer for the selected channel.

3 **Repeat** activates repeat for titles of a folder **ALL** or for the currently playing title **ONE** (activated only with NET input).

7.5 Screen 4



1 If the DNC is in stand-by mode, press key **Power On** to switch the unit on.

2 Use **Power Toggle** to switch on/off the DNC. This key has the same function as the **power** key on the front panel. If the DNC is in stand-by mode, **Power Toggle** switches on the unit. If the DNC is already switched on, **Power Toggle** switches off the unit to stand-by mode.

3 If the DNC is switched on, use key **Power Off** to switch the unit off to stand-by mode.

8 Device setup

To adjust the DNC to your preferences, please use the setup menu. You can control the menu with the keys on the front panel of your DNC or with your remote control. For more comfortable adjustment use our software Audionet RCP. You only need to integrate your DNC to your network (see section: ***"8.3.10 - Example for Network setup" on page 55***).

To control your DNC with front panel keys, use **set**, **up** and **down**.

set holding the key pressed for more than 2 seconds opens the system menu. If you hold again you leave the menu without saving, you cancel. Short push saves/applies a menu item or switches into marked menu item.

up, **down** are used to select setup menu items and change.

For easier control you can use the directional pad on your System Remote Control *Harmony One* (see section ***"7 - Audionet system remote control" on page 29***).

To setup your DNC very comfortable, please use our software Audionet RCP. You can control everything with mouse and keyboard. You can see everything on your computer display. Especially with equalizer setup it is very useful, because you have a good overview (see also Audionet RCP user's manual).

Note

- Changes will only take effect if you push **OK** on your remote control or short push of **set** key on DNC front panel.
- Within menus with more than one page the fastest way to reach the last entries is to press **up**. To reach, for example, entry **9 of 9**, open the main menu (marker **1 of 9**) and press **up** once instead of pressing **down** several times. Use the same procedure with keys Up / Down on the directional pad of the Audionet System Remote Control *Harmony One*.

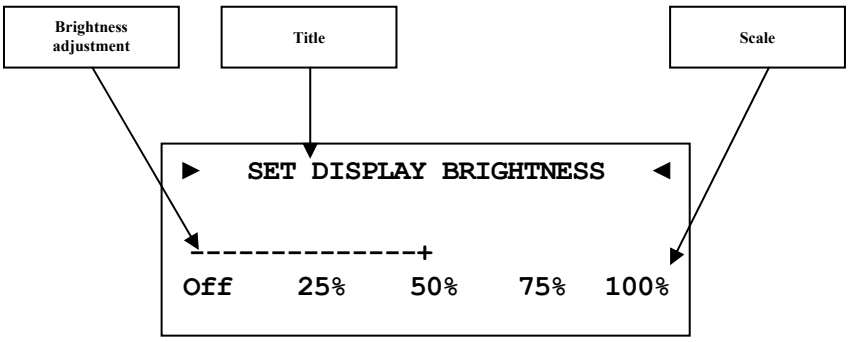
8.1 Overview device menu

Global Setup	Function
Display	Setup display brightness
Auto start	Setup auto start mode
Power-Off Mode	Setup stand-by mode
Channel Name	Name the input channel (12-digits)
Digital EQ Setup	Setup the parametric 5-band-equalizers (separately for each channel)
Trigger Out	Setup Trigger Out for control of non Audionet devices (e.g. active subwoofer)
Speaker Distance	Setup distance between speakers and hearing position
Network Setup	
Manage Network	Manage main network setup
Connection Type	Select type of connection
DHCP	Switch on/off DHCP
IP Address	Setup IP address for your DNC
IP Mask	Setup subnet mask
Gateway	Setup gateway IP address
DNS	Setup DNS IP address
RCP Port	Setup network port for software Audionet RCP
Wireless Setup	Setup Wi-Fi (SSID, crypt,…)
Save User Setting	
Load User Setting	
Device Info	

8.2 Global setup

8.2.1 Display

Adjust the display brightness with the front panel keys or your system remote control *Harmony One*.



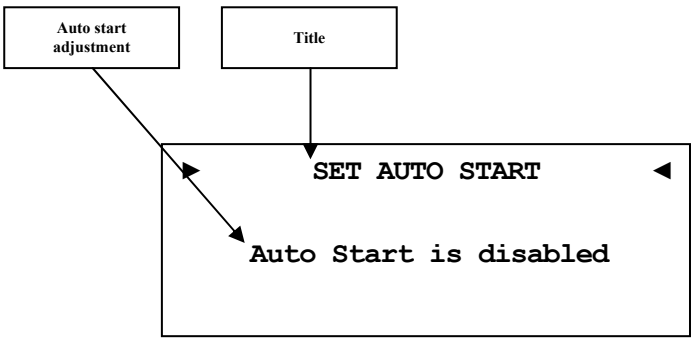
Note

- Get to this option at anytime opening the **`Global Setup`** and navigating to **`Display`**. Use directional pad or **`up`** / **`down`** to select desired brightness.
- It is also possible to set display brightness with the software Audionet RCP.
- Is the brightness set to **`Off`** the display is only on during setup. It switches off automatically several seconds after the last user entry.
- The DNC activates the display saver automatically 12 minutes after last user entry/activity.
- During active display saver, the display shows only the number of the selected input channel **`NET,`** for example. The display brightness is always reduced to 25%, and the location of the information text will change randomly every 12 seconds to prevent any burn-in effect of the display.
- The display saver is deactivated, and the display returns to its normal mode as soon as any user entry is detected
- The user cannot switch off the automatic display saver function!

Important

- **Long-term usage of the display set to maximum brightness (setting 100%) may cause extended signs of wear resulting in a decay of contrast or brightness of individual dots in the display. Do not use the display with a brightness set higher than the factory default of 50% for a longer period of time!**

8.2.2 Auto start

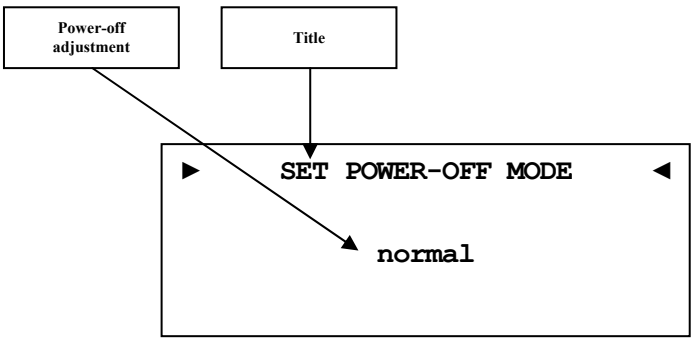


disabled The Auto Start function is disabled. After switching on the mains switch [1] on the back panel, the DNC enters the stand-by mode. You have to use the **power** key on the front panel or **Power On** or **Power Toggle** keys on the Audionet System Remote Control *Harmony One* to switch on the unit into normal operating mode*.

active The Auto Start function is active. As soon as you connect the DNC to mains (i.e. use the mains switch [1] on the back panel) the unit starts up automatically to normal operating mode. Use this setting for timer controlled operations.

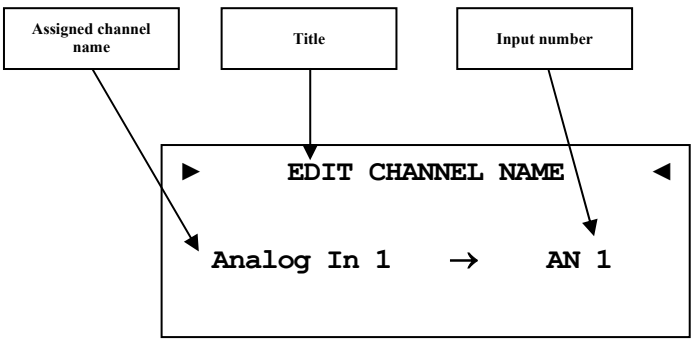
* or switched on/off by Activities on the Audionet System Remote Control; see separate user's manual *Harmony One*

8.2.3 Power-off mode



The DNC differentiates between two power-off modes. Firstly the **normal** power-off mode and secondly the **Quick Start** mode.
The factory default setup is the **normal** mode, because of low power consumption in stand-by (less than 1W). If you use normal power mode, you cannot switch on the DNC with the software Audionet RCP or with Audionet Link.
With the **Quick Start** mode activated, the network interface remains activated, and the DNC start up process is accelerated, because the network interface must not boot up. Furthermore you can use software Audionet RCP or Audionet Link to switch on the DNC. If you select **Quick Start** mode the power consumption is increased. Check out *"9.7 - Specifications" on page 69*.

8.2.4 Channel name



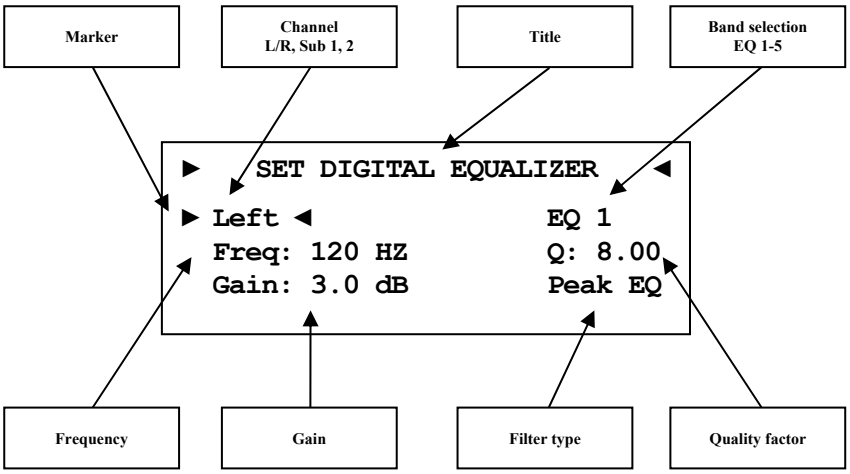
You can assign a fully user-definable name up to 12 characters in length to each of the eight input channels. The display shows the number of the currently selected input channel and the assigned channel name. The cursor marks the character you now may alter.

Note

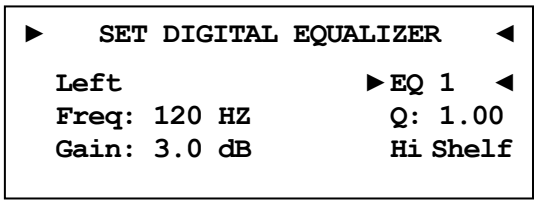
- For easier adjustment of the channel name use the software Audionet RCP (see user's manual RCP).
- All settings apply to the currently selected input channel.

8.2.5 Digital equalizer setup

The digital EQ is a parametric 5 band equalizer with separated adjustment for left and right channel.



You can navigate through the menu of the digital EQ with the directional pad on your system remote control. With up/down keys you choose the parameter for adjustment, left/right changes the selected parameter. If you enter the digital equalizer menu item, the first selected parameter is **`Left`**. Here you select the speaker channel you want to adjust [**`Left, Right`**].



Secondly you select the band [**`EQ 1 – EQ 5`**]. For each band you can adjust the following parameter:

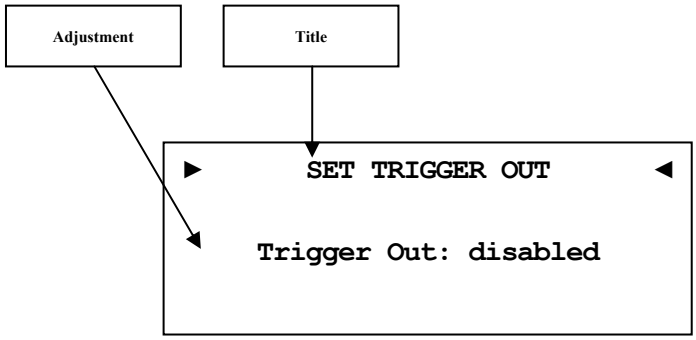
Freq	center- respectively cutoff frequency (depends on filter)
Q	filter quality (depends on filter)
Gain	gain (from -12 dB to +6 dB)
Filter type	you can choose between seven different filter types

Filter type	Short description
Peak EQ	band-pass filter
Hi Shelf	treble control
Lo Shelf	bass control
LP 2nd	low pass filter 2nd order
HP 2nd	high pass filter 2nd order
LP 1st	low pass filter 1st order
HP 1st	high pass filter 1st order

Note

- For easier adjustment of equalizer parameters use the software Audionet RCP (see user's manual RCP).
- All settings apply to the currently selected input channel.

8.2.6 Trigger out

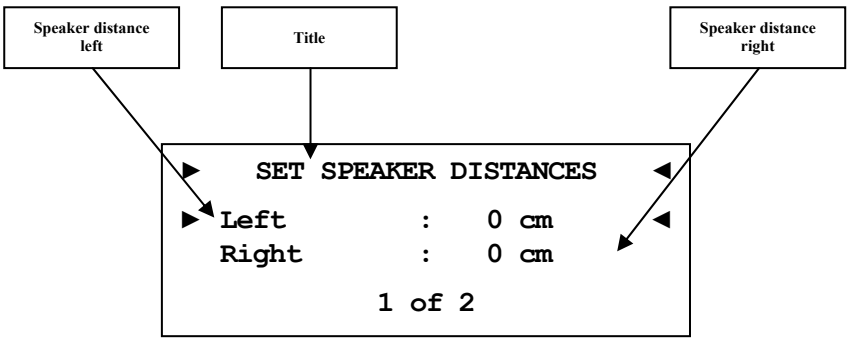


The trigger out connection could be used to remotely switch on/off non Audionet devices. By factory default the voltage is adjusted to 12V DC. If necessary the output voltage can be re-configured to 5V DC. Changing the voltage must be done by authorized personnel only. Ask your local dealer for support.

Note

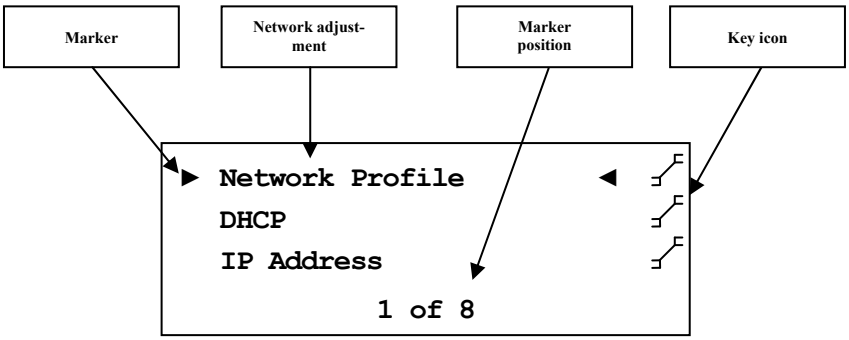
- All settings apply to the currently selected input channel.

8.2.7 Speaker distance



Use this menu to enter the distances from your speakers to your listening position. The distance ranges from 0 to 700 cm in steps of 5 cm. According to the entered distances, the DNC calculates the necessary delays of each channel to ensure that all signals from all speakers arrive at the same time at the listening position.

8.3 Network setup



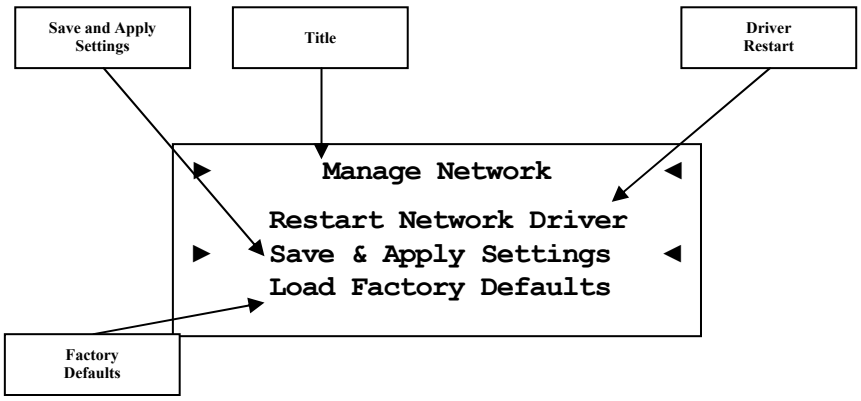
Your DNC is set to receive DHCP* information from your network. If you connect your device to a wired network, it should be ready to use. For use of fixed IP address you may contact your network administrator to get the information you need to adjust. Use your system remote control *Harmony One* to adjust your IP and Wi-Fi information. An adjustment with the front panel keys is possible. To set numbers for an IP address you can use the numeric key pad. For letters you can use the numeric key pad as well (SMS principle) or you navigate with the directional key pad. With up/down you change the letter and with left/right you move the cursor. Confirm your input with **OK** key. An example for network configuration can be found at the end of the section (see section: ***"8.3.10 - Example for Network setup" on page 55***). Most network terms are defined in glossary (see section: ***"9.1 - Glossary" on page 61***).

Note

- Wireless setup can also be done with the software Audionet RCP. For the time of configuration you need to connect your DNC to the wired network. Later you may disconnect the cable for using a Wi-Fi connection.
- Every block of an address consists of three numbers. Sometimes the triplets are not written down in full length. If that is the case with an address you need for your network setup, then the leading zeros have been left out. You need to complete these addresses for use with your DNC referring to the following example: e.g. 0.1.10.100 has to be completed to 000.001.010.100.

*see section: ***"9.1 - Glossary" on page 76***

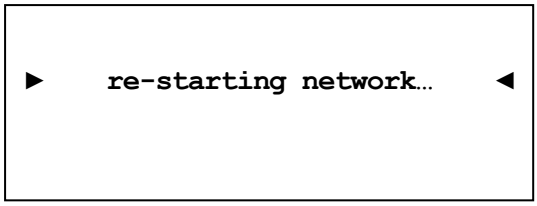
8.3.1 Manage Network



In this menu you find the basic setup for managing the network preferences of your DNC. The following explains the menu in detail.

8.3.1.1 Restart Network Driver

Sometimes it might be necessary to restart the network driver of the DNC. With this function you can restart the driver without having to switch the device off completely. The driver restarts with its current settings.
Select this menu entry and confirm your selection with **OK**. The DNC issues the following message:



It takes about 30 seconds for the driver to be restarted. Then your Audionet device will be available in the network again.

8.3.1.2 Save & Apply Settings

This entry has to be selected every time you finished network configuration and want to save and apply the new values. Made changes to your network setup will be dismissed without saving and applying them unless you select this particular entry.
Select this menu entry and confirm your selection with **OK**. It takes about 30 seconds for the driver to be restarted. Then your Audionet device will be available in the network again.

Note

- You have to execute this entry if you want to save and apply your made changes. Otherwise your configuration will be dismissed!

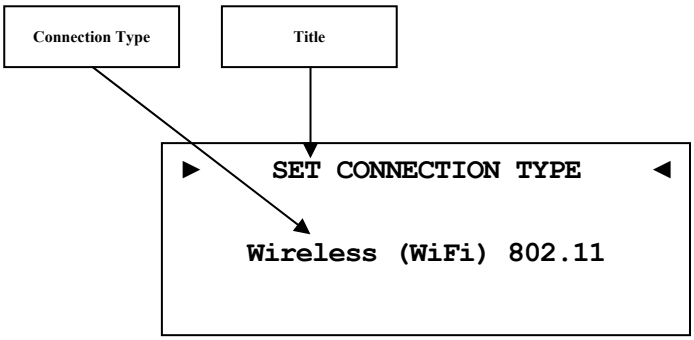
8.3.1.3 Load Factory Defaults

With this function you can restore the factory settings of your DNC's network driver. The DNC is factory-set to wired ethernet connection with DHCP activated. This way, if you connect your device to a wired network, it should be ready to use.
Select this menu entry and confirm your selection with **OK**. The factory default settings are now loaded.
After successfully loading the factory defaults the cursor automatically marks the menu entry Save & Apply Settings. This entry has to be executed as described in section ***"8.3.1.2 - Save & Apply Settings" on page 44*** to apply the factory defaults.

Note

- You have to execute menu entry **`Save and Apply Settings`** if you want to save and apply the factory default settings. Otherwise this configuration will be dismissed!
- If you accidentally selected this entry and the factory default settings are loaded, you are able to exit the menu with the key **Exit** of your Audionet System Remote Control *Harmony One* or by pressing **set** longer than 2 seconds. This way the settings accidentally loaded will not be activated and your former settings will remain.

8.3.2 Connection Type

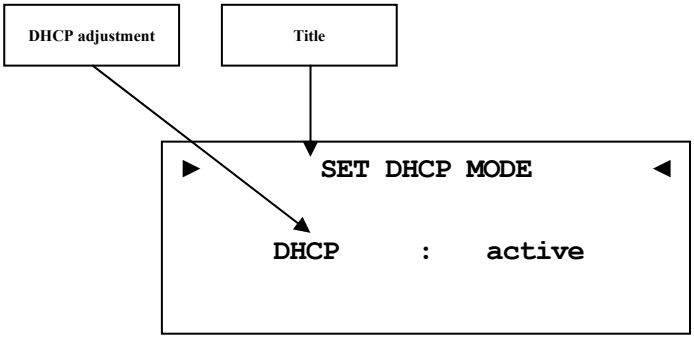


Wired Ethernet Factory setting. Your DNC connects to a network via a connected network cable.

Wireless (WiFi) Your DNC establishes a wireless connection via the included WLAN Antenna.

Only if **Wireless (WiFi) 802.11** is selected, the menu ***"8.3.9 - Wireless setup" on page 50*** is available.

8.3.3 DHCP



disabled DHCP client mode is disabled

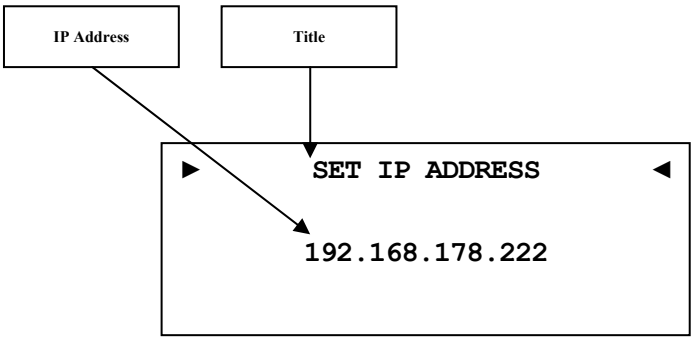
active Your DNC will try to get information via DHCP.

If the IP address is received from DHCP server, the following menu items must not be setup. Menu item IP address, IP mask, gateway and DNS are without effect and they are overwritten by DHCP information.

Tip

- Use directional pad on your System Remote Control *Harmony One*. Confirm everything with **OK** key.

8.3.4 IP Address



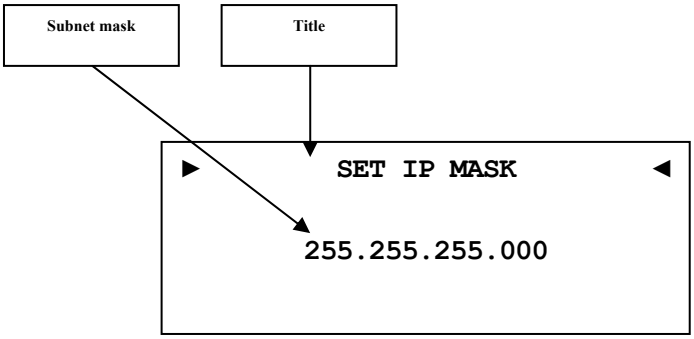
Setup your chosen IP address.

The used address type is IPv4 (e.g. 192.168.178.222).

Tip

- Use numeric key pad on your System Remote Control *Harmony One*. Confirm everything with **OK** key.

8.3.5 IP Mask

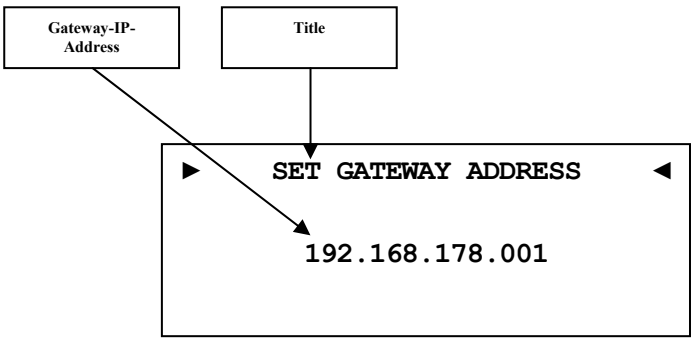


Setup your used subnet mask (e.g. 255.255.255.000).

Tip

- Use numeric key pad on your System Remote Control *Harmony One*. Confirm everything with **OK** key.

8.3.6 Gateway

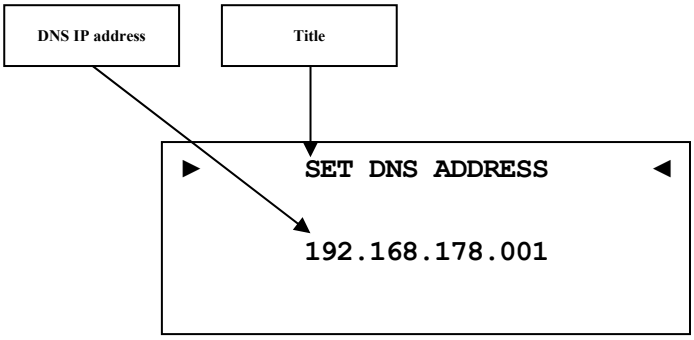


Setup your gateway IP address (e.g. 192.168.178.001).

Tip

- Use numeric key pad on your System Remote Control *Harmony One*. Confirm everything with **OK** key.
- The gateway address is mostly the same as the router IP address.

8.3.7 DNS

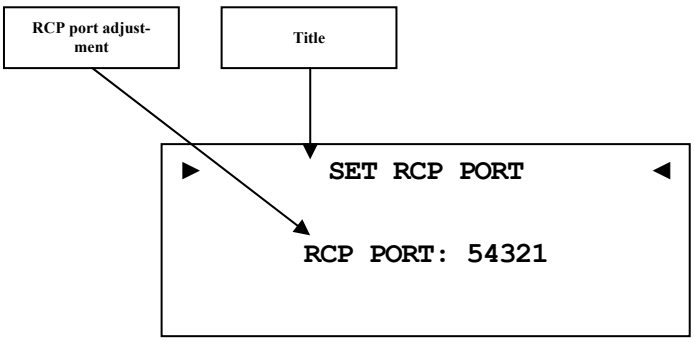


Setup your DNS IP address (e.g. 192.168.178.001).

Tip

- Use numeric key pad on your System Remote Control *Harmony One*. Confirm everything with **OK** key.
- The DNS IP address is mostly the same as the router IP address.

8.3.8 RCP port

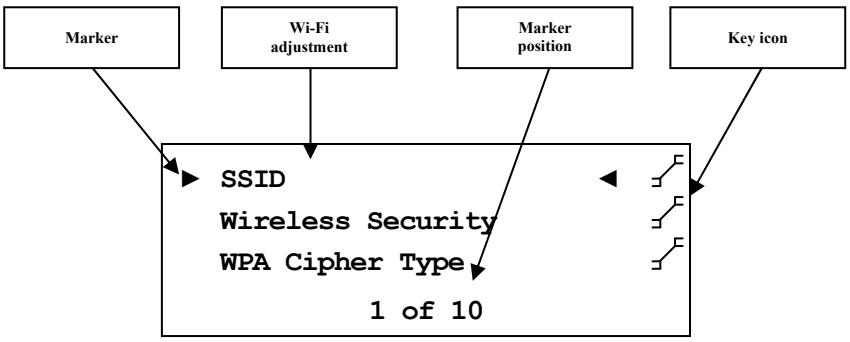


The communication port for software Audionet RCP and Android App aMM is set up here. This adjustment should only be done by professional users. Setup a value between 50000 to 59999. The default value has to be changed only if you have network communication problems. Ask your network administrator for support.

Tip

- Use directional pad left/right on your System Remote Control *Harmony One*. Confirm everything with **OK** key.

8.3.9 Wireless setup



All Wi-Fi adjustment has to be done manually.

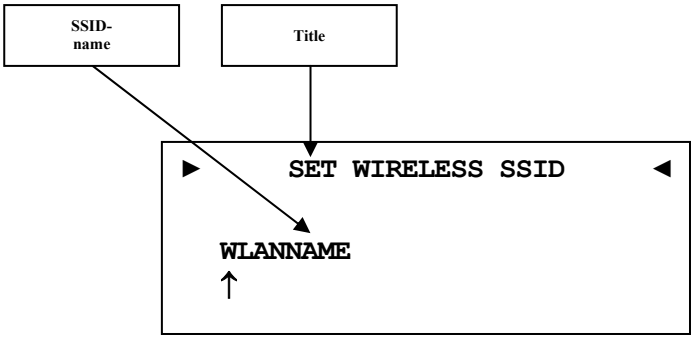
You can find all your Wi-Fi adjustments in your router or access point. If you have no access to this information ask your network administrator.

Note

- You can use software Audionet RCP to adjust Wi-Fi settings. A wired network connection is necessary. This connection can be removed after setup (see user's manual Audionet RCP).

8.3.9.1 SSID

Enter your Wi-Fi name. Attention on case sensitive input.

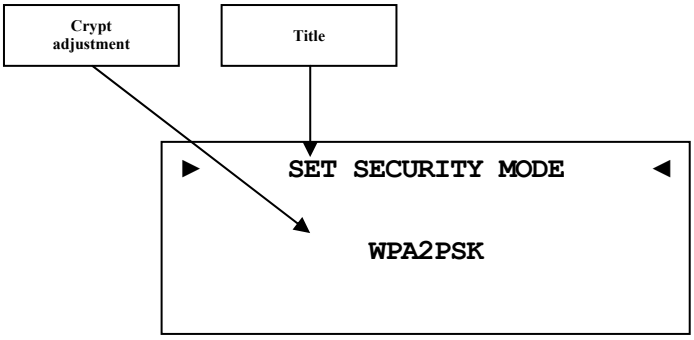


Note

- Use numeric key pad on your System Remote Control *Harmony One* for letter input (SMS principle). You have to switch the cursor position forward manually. Use the left/right keys on directional key pad. Confirm the adjustment with the **OK** key.
- Use key **Cancel** 9 to delete the selected character. In this case the key **Cancel** 9 does not execute a step backward. Press **Exit** to leave the menu without saving.

8.3.9.2 Wireless security

Select your Wi-Fi crypt type. Take this information from your router.



None	no crypt type selected (not recommended).
WEP	Wired Equivalent Privacy, out-dated and unsecure security standard (not recommended).
WPAPSK	Wi-Fi Protected Access Pre-shared key was an transitional standard to replace WEP until the new WPA2 was defined (not recommended).
WPA2PSK	Wi-Fi Protected Access 2 Pre-shared key is the regular standard for Wi-Fi security (recommended).

Note

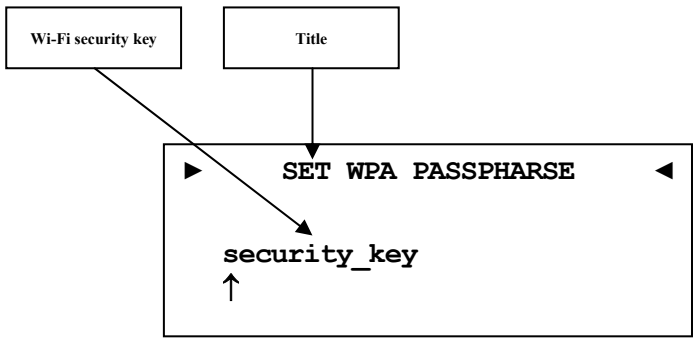
- Use directional pad left/right on your System Remote Control *Harmony One*. Confirm everything with **OK** key.
- Wikipedia links to all security terms can be found in section ***"9.2.1 - Wireless security" on page 63***.

Tip

- In the preferences of some new routers / access points the used WPA2PSK crypt type might be called "WPA2PSK – Personal" or "WPA2 – Personal".

8.3.9.3 WPA pass phrase

Enter your WPA network key. Attention on case sensitive input. This phrase is only active with **WPAPSK** or **WPA2PSK**.

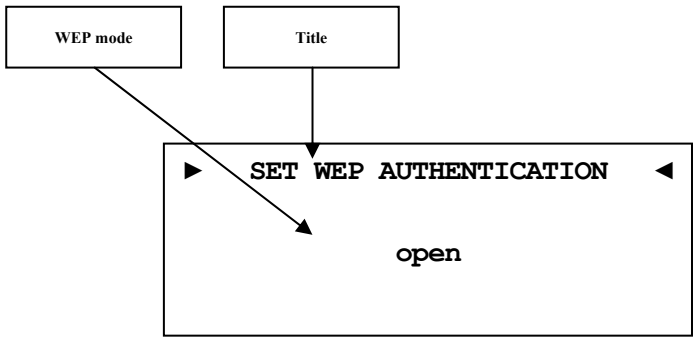


Note

- Use numeric key pad on your System Remote Control *Harmony One* for letter input (SMS principle). You have to switch the cursor position forward manually. Use left/right keys on directional key pad. Confirm the adjustment with the **OK** key.
- Use key **Cancel** 9 to delete the selected character. In this case the key **Cancel** 9 does not execute a step backward. Press **Exit** to leave the menu without saving.
- The passphrase has to consist of at least 8 characters. Maximum length is 63 characters. The longer the passphrase the more secure the connection. For further information see the documentation of your router / access point.

8.3.9.4 WEP authentication

Select the WEP setup to your network.



open Open Authentication

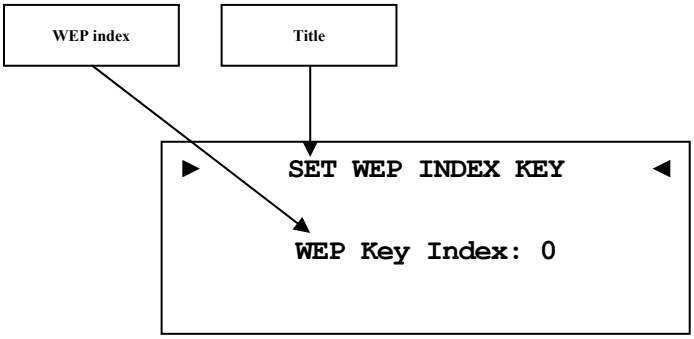
shared Shared-Key-Authentication

Note

- Chose authentication mode with directional pad. Left for **open** and right for **shared**. Confirm the adjustment with the **OK** key.
- We strongly recommend to use WPA2PSK standard to secure your Wi-Fi connection. WEP is not secure.

8.3.9.5 WEP key index

Select the Index Key 0-3

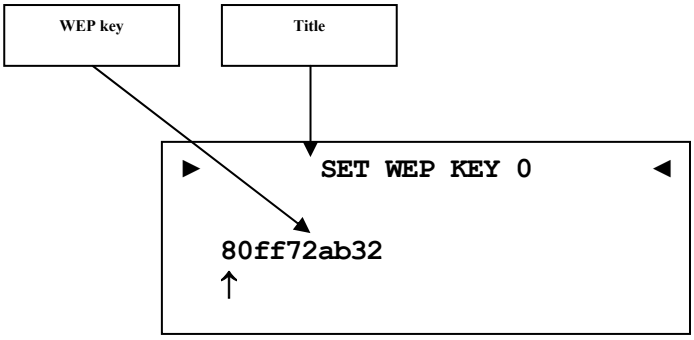


Note

- Select the WEP key index with your directional pad left / right. Confirm the adjustment with the **OK** key.

8.3.9.6 WEP key 0-3

Enter the WEP key phrase for key 0 - 3.



Note

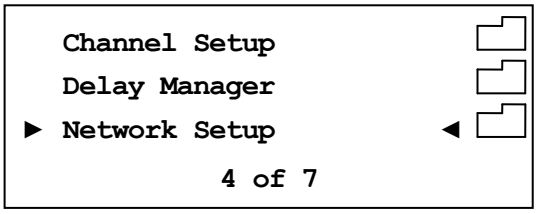
- Use numeric key pad on your system remote control *Harmony One* for letter input (SMS principle). You have to switch the cursor position forward manually. Use left/right on directional key pad. Confirm the adjustment with **OK** key.
- Use key **Cancel** 9 to delete the selected character. In this case the key **Cancel** 9 does not execute a step backward. Press **Exit** to leave the menu without saving.
- A WEP key contains only numbers 0-9 and letters a-f.
- A WEP key consists of 10 or 26 digits.

8.3.10 Example for Network setup

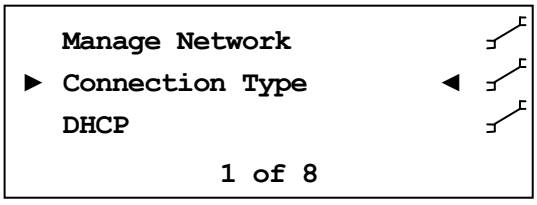
In this sample all adjustments are made with the System Remote Control *Harmony One*. Compare the keys in this section ***"7.1 - Key assignment DNC" on page 30***.

Choose the Device **DNC** (see section: ***"7 - Audionet system remote control " on page 29***).

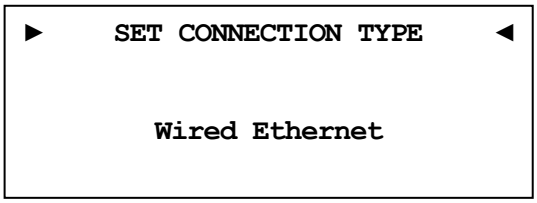
Open the system menu with the **Menu** key and mark the menu item **Network Setup** with the directional pad keys up/down. Confirm with **OK** key.



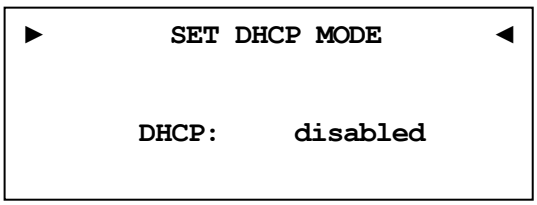
Switch to menu item **Connection Type.**



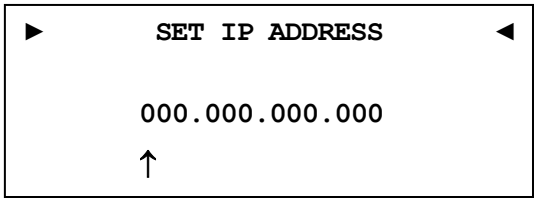
With the keys left / right of the directional pad choose your preferred connection type. Connection types **Wired Ethernet** and **Wireless (WiFi) 802.11** are available. Confirm with **OK**.



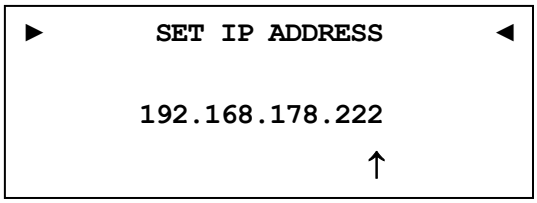
In this sample we suppose that you do not use DHCP in your network. Therefore we disable the DHCP function and set a fixed IP address. Open the menu item **DHCP**, press the left directional pad to select **disabled** and confirm with **OK** key. The DNC saves the adjustment and switches to the Network Setup menu.



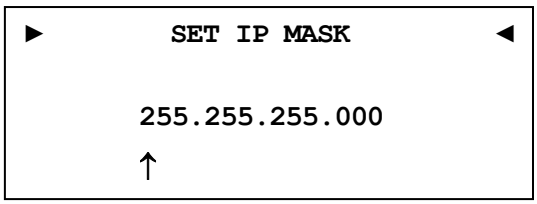
Now you have to enter the IP address you selected for your DNC. (e.g. 192.168.178.222 or 192.168.000.222 or 192.168.001.222).



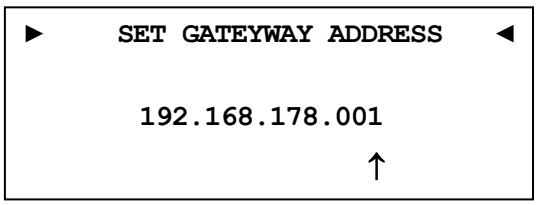
Insert the IP address directly with the numeric key pad in the lower section on your System Remote Control. Confirm with **OK** key. The DNC applies the adjustment and switches to the Network Setup menu.



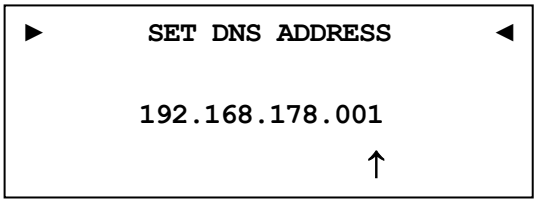
Select the menu item **IP Mask** and compare the adjustment with your data. The default value 255.255.255.000 should be the same with your network and could be confirmed with **OK**. Otherwise, enter your settings via numeric keypad.



The gateway in your network is probably the router, so you have to set the routers IP address as gateway address. Enter the address which is correct within your network and confirm.



Mostly the DNS address is the same like the routers IP address. If you use another DNS, enter the DNS IP address which is correct within your network configuration. You can find a DNS address through the internet. Use a search engine to find DNS server addresses for your location.



With this menu item the section fixed IP address is completed.

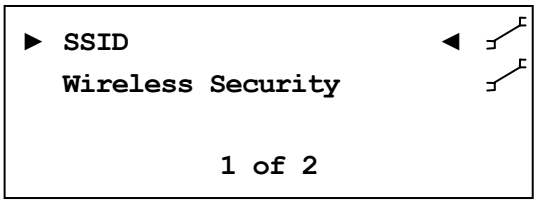
When you use your DNC in a wired network, the network setup is completed. You can now save and apply your adjustments. If you want to use a Wi-Fi connection skip to paragraph "Wi-Fi adjustment".

Save network profile

Within the menu item **Manage Network** select **Save & Apply Settings** and confirm with OK. The new created network profile with all its settings is now saved and will immediately be applied.

Wi-Fi adjustment

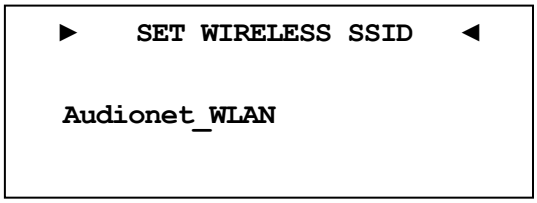
Within the menu **Manage Network** select entry **Connection Type**. Now change to **Wireless (WiFi) 802.11** and confirm with OK. Back in **Network Settings** the menu item **Wireless Setup** is now available. Now you have to enter the network name and network security key. Maybe you have to ask your network administrator or check out your router configuration.



Note

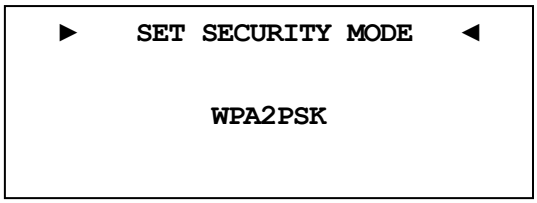
- In menu **Connection Type** the adjustment **Wireless (WiFi) 802.11** has to be made. Otherwise menu entry **Wireless Setup** is not visible.

Select **SSID** and set the network name.

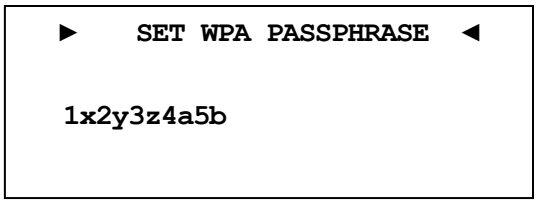


You have to be attentive to case sensitive input. Use the numeric key pad (SMS principle) for numbers and letters. With the left/right keys of the directional pad you switch to the next input position. The cursor does not step forward automatically. Confirm your input with **OK**.

Now select your security mode.



You can choose between **WEP, WPAPSK** and **WPA2PSK**. All settings have to be confirmed with **OK** key. Because the WEP mode is not secure, we only describe the setup of WPA security mode.
At last insert your Wi-Fi security key into menu item **WPA Pass Phrase**. Sample: **1x2y3z4a5b**



Confirm your input with **OK**.If all your network adjustments are correct now your settings can be saved.

Save network profile

Within the menu item **Manage Network** select **Save & Apply Settings** and confirm with **OK**. The new created network profile with all its settings is now saved and will immediately be applied.

8.4 User settings

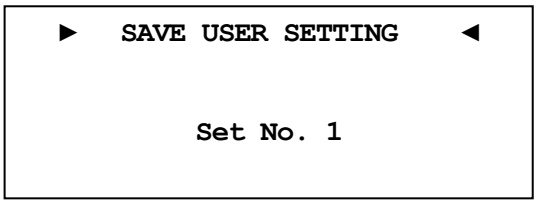
You can store 20 separate user settings to your DNC.

This function can be selected with the keys on the front panel and with the System Remote Control *Harmony One*. Furthermore you can use the software Audionet RCP (see Audionet RCP user's manual).

A user setting contains all information which is currently set, i.e. all EQ adjustments for all channels, also speaker setup (e.g. subwoofer active).

Example for usage: Store a user setting with less bass; you may call it "night mode".

8.4.1 Save user setting



Open the system menu with **Menu** or with a long press on **set**. Navigate to menu entry **Save User Setting** with **up** / **down**.

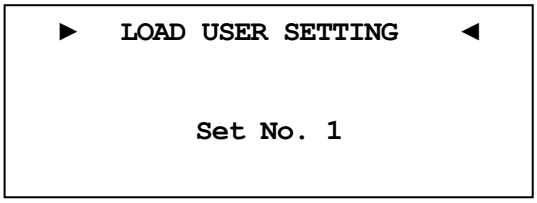
Select the slot number with left/right where you would like to save the current setup.

Confirm your input with **OK** key.

Note

- If you save to a user setting all existing data will be overwritten.
- If you do not want to set all adjustments again, you can copy the desired user setting. For that purpose load the user setting and store it to another memory slot.

8.4.2 Load user setting

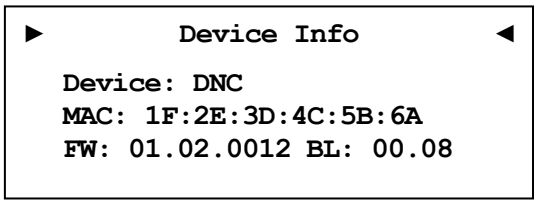


Open the system menu with **Menu** or with a long press on **set**. Navigate with **up** / **down** to menu entry **Load User Setting**.

Select the setting you want to load from with left / right.

Confirm your input with **OK** key.

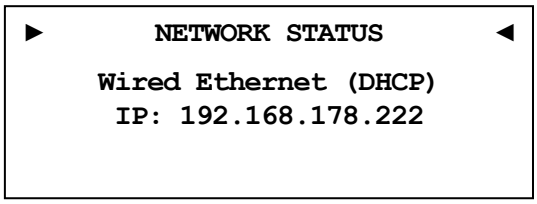
8.5 Device info



Here you will find information about your hardware and software.

- MAC address
- Firmware version
- Boot loader version

With key left/right or **OK** you can proceed to the second page. The second page contains the following information:



Connection Type

DHCP adjustment

IP Address of the device

Note

- Also take a look in the software Audionet RCP user's manual.

9 Additional information

9.1 Glossary

- **Switch:**

A switch is the central connection unit in a computer network. Every device is directly or indirectly connected to the switch.

- **Router:**

A router is sharing out data through the network. Mostly the router device takes over other several features, such as Gateway-Server, DHCP-Server, DNS-Server, Switch, WLAN-Access Point, Modem, UPNP-AV and NAS via USB.

- **Access Point:**

An access point is an extension of a router. If a router is incapable of providing WLAN or its WLAN range is to be extended, an access point can be connected to one of the LAN ports of the router and extend its functions.

- **Gateway:**

A gateway connects computer or router to other networks (internet) and controls these connections.

- **Modem:**

A modem establishes a connection between LAN and WAN.

Nowadays all devices mentioned above are built in one device, which is called **router**.

- **IP-Address:**

The IP-Address identifies a device in the network. It is comparable to a postal address. An IP address can only be used once within a network!
IPv4 (192.168.0.1) common standard
IPv6 (`2001:db8::1428:57ab`) future standard

- **DNS-Server:**

A DNS-Server translates textual request to IP addresses and provides simple communication to the internet.
(e.g. www.audionet.de is translated to "194.000.201.201")

- **Proxy:**

Proxy-Server is mostly used in lager network facilities to guarantee more control and security to the network. Data transfer could be more efficient and speeded up. Home networks do not need a proxy.

- **LAN (Local Area Network):**

Localized network (home or company network)

- **Ethernet (cable):**

Ethernet is a technology that specifies hardware and software for wired data networks. An Ethernet connection offers a very good transmission rate and should be preferred.

- **Power LAN (mains supply):**

With power LAN technology you can connect Ethernet device through your mains supply. Transfer rate could be faster and more stable as a Wi-Fi connection. A disadvantage could be the harmonics, which are produced by such devices and pollute your mains supply.

- **WLAN (Wi-Fi):**

A Wi-Fi connection can be established very quickly, because you need no wire. The mayor disadvantages are the lower data transfer rate and the technical reliability. Physical structures or a large distance to the access point could harm the signal. We recommend wired connection.

- **WAN (Wide Area Network):**

Wide area network connections are used to connect to the internet.

- **Client:**

A client is a device which has no administrative or special jobs in a network (e.g. PC, Notebook, DNC, iPad, etc.).

- **Server:**

Servers provide services to clients or other servers. A server could have multiple services running on it.

- **NAS (Network Attached Storage):**

A NAS is a network storage device, which makes data (e.g. music, pictures, video and documents) easily accessible to all network devices.

- **UPnP-MS (Universal Plug and Play – Media Server):**

UPnP is a defined network standard to connect clients and servers. It is very easy to use, because you do not have to set up a lot. Only connect and play. UPnP media servers are the most common way to provide data through a home network. A media server could also be part of a NAS or router or it could run as program on a Computer.

- **SSID:**

The term SSID is the short form of service set identifier and describes what is generally known as the name of the network. A wireless network must have a name, so that client devices are able to find, identify and connect to the network.

- **Passphrase:**

Every wireless network should be protected by a passphrase. Client devices are only able to access a protected wireless network if they pass the passphrase check. The passphrase is used for authentication and identification and is thus an important element of network security.

9.2 Link collection

Note

- We are not responsible for Wikipedia links. If you are looking for scientifically proven information, have a look at referenced science books in wiki article.

9.2.1 Wireless security

WPA: http://en.wikipedia.org/wiki/Wi-Fi_Protected_Access

WPA2: http://en.wikipedia.org/wiki/Wi-Fi_Protected_Access#WPA2

PSK: http://en.wikipedia.org/wiki/Pre-shared_key

EAP (Radius): http://en.wikipedia.org/wiki/RADIUS
http://en.wikipedia.org/wiki/Extensible_Authentication_Protocol

WEP: http://en.wikipedia.org/wiki/Wired_Equivalent_Privacy

9.3 Equalizer filter type

The different EQ filters are shown below. Listed are all adjustments for each filter, and the Wikipedia link for detailed information.

Note

- We are not responsible for Wikipedia links. If you are looking for scientifically proven information, have a look at referenced science books in wiki article.

9.3.1 Peak-Filter

Gain range: -12 dB to +6 dB

Frequency range: 20 to 20000 Hz

Filter quality (Q): 0.3 – 8.0

Wikipedia: en.wikipedia.org/wiki/Band-pass_filter

9.3.2 High shelf filter

Gain range: -12 dB to +6 dB

Frequency range: 20 to 20000 Hz

Wikipedia: en.wikipedia.org/wiki/Equalization_(audio)#Shelving_filter

9.3.3 Low shelf filter

Gain range: -12 dB to +6 dB

Frequency range: 20 to 20000 Hz

Wikipedia: en.wikipedia.org/wiki/Equalization_(audio)#Shelving_filter

9.3.4 High-pass filter 2nd order

Attenuation at set Frequency: 3 dB

Filter quality (Q): 0.3 to 2.0

Attenuation below the set frequency is 40 dB per decade.*

Wikipedia: en.wikipedia.org/wiki/High-pass_filter

9.3.5 Low-pass filter 2nd order

Attenuation at set Frequency: 3 dB

Filter quality (Q): 0.3 to 2.0

Attenuation above the set frequency is 40 dB per decade.

Wikipedia: en.wikipedia.org/wiki/High-pass_filter

9.3.6 High-pass filter 1st order

Attenuation at set Frequency: 3 dB

Attenuation below the set frequency is 20 dB per decade.

Wikipedia: en.wikipedia.org/wiki/High-pass_filter

9.3.7 Low-pass filter 1st order

Attenuation at set Frequency: 3 dB

Attenuation above the set frequency is 20 dB per decade.

Wikipedia: en.wikipedia.org/wiki/High-pass_filter

* Note: Technical considerations describe order-n filters with attenuation of *n•20dB/Decade*, the corresponding description often used in music related topics is *n•6dB/Octave*.

9.4 Error handling (FAQ)

Problem with internet radio streams:

A good, stable and fast connection to the internet, network is the most significant item. If your local conditions are fine, dropouts may be the problem of the radio stations broadcast. Switch to another station. If there is no problem it is perhaps a problem of the radio stations broadcast. Maybe it is overloaded.

Local problems could be an overload of your network, by downloads from the internet or data which is moved through your network as well as other streaming (e.g. video). Reduce or quit connections to receive internet radio without dropouts. A bad Wi-Fi connection could also cause dropouts.

No control:

Switch off your device through the power button on the front panel. Then switch off the mains circuit breaker on the back panel. If there is no action while you press the power button on the front, directly take the mains circuit breaker on the back panel. Wait 20 to 30 seconds until you switch on again. If there is still a problem, contact your local dealer for support.

Which control has no function: If the remote control does not react try the front panel keys, maybe it is only a problem of the remote control.

Remote control has no function:

Is the rechargeable battery charged?

Is the control light shining?
No – the battery is not charged!
Have you plugged in the power supply? Is your wall socket switchable?
Yes – Maybe the rechargeable battery is defect!
Ask your local dealer for support.

The software Audionet RCP does not establish a connection to DNC:

Restart your software and research for DNC again.

If this is without success, switch off the DNC (first stand-by, then mains circuit breaker) and wait 30 seconds. Startup your DNC again and switch to NET input. Wait until **`Booting`** is no longer shown in the display**.** Now start your software Audionet RCP and search for DNC.

If there is still a problem, check out your network and network adjustment or ask your network administrator for support.

9.5 Security advice

Important

- Avoid packaging material, especially plastic bags, to come into children's hands.

- Store and operate the unit in a dry room at a reasonable room temperature.

- Avoid moisture or any liquid to get into the unit.

- Place the device with enough circulation of air.

- **Do not cover**, e.g. with a blanket.

- **Do not open** the case. Unauthorized opening will cause loss of guarantee.

- Prevent short circuit to the outputs.

- Switch off all devices if you plug any cable.

- Use a dry cloth for cleaning.

- If massive trouble on the mains power grid is to be expected. Disconnect all devices from mains to prevent electrical overload. Disconnect antenna and network connections as well.

We would like to wish you many exciting listening experiences with your new Audionet product!

If you still have any questions, don't hesitate to ask your competent Audionet dealer.

9.6 Factory defaults

Option	Adjustment
Global Setup	
Display	**50%**
Auto start	**disabled**
Power-Off Mode	**normal**
Channel Name	**Digital In 1, 2** **Optical In 1, 2** **Streaming In** **USB Audio In** **FM-Tuner**
Digital EQ	**disabled**
Trigger Out	**disabled**
Speaker Distance	**Left / Right: 0 cm**
Parametrical digital EQ	for all input channel
Gain	All channel, all MPEs: + **0 dB**
Q	All channel, all MPEs: **1.00**
Freq.	**50,207,725,3147 & 10413 Hz**
Network Setup	
DHCP	**active**
IP Address	**192.168.178.222**
IP Mask	**255.255.255.000**
Gateway	**192.168.178.001**
DNS	**192.168.178.001**
RCP Port	**54321**
Wireless Setup	
SSID	**blank**
Wireless Security	**WPA2PSK**
WPA Cipher Type	**AES**
WPA Pass Phrase	**blank**
WEP Authentication	**open**
WEP Key Index	**0**
WEP Key 0	**blank**
WEP Key 1	**blank**
WEP Key 2	**blank**
WEP Key 3	**blank**

9.7 Specifications

Function	network - compatible streaming client
Frequency response	0 – 1.000.000 Hz (-3 dB)
attenuation coefficient	typ. 1000 at 100 Hz
THD+N	< -104 dB @1 kHz
capacitance	> 44.000 µF
Input digital	2 SPDIF RCA jack, gold plated, Teflon isolated (WBT) 2 SPDIF TosLink 1 XLR AES/EBU, 110 Ohm, gold plated, Teflon isolated (Neutrik) 1 USB (A) (for ext. hard drive, USB stick, iPod etc) 1 USB (B), USB Audio 2.0 (asynchronous) 1 RJ45 Ethernet 10/100 BASE-T 1 SMA Connector WLAN 1 Audionet Link, optical
Output	1 pair RCA jack, gold plated, Teflon isolated (WBT) 1 pair XLR symmetric, gold plated (Neutrik) 1 Audionet Link, optical 1 3,5mm TSR connector mono Trigger Out (50mA) 1 Sub D9 Serial interface RS232
Mains	220 V…240 V, 50…60 Hz
Power consumption	< 1 W Stand-by max. 85 W
Dimensions	width 430 mm height 70 mm depth 310 mm
Weight	8 kg
Design	**Front:** brushed aluminum, 10 mm, black anodized, white printing or aluminum natural, 10 mm, anodized, black printing **Display:** red or blue **Cover plate:** aluminum, black anodized **Side plate:** aluminum, black anodized **Chassis:** sheet steel, black varnished

Specials	- System remote control *Harmony One* - Remote control with software - automatic mains phase detection - separated power supply for digital and analog section - fully DC coupled, no condenser in signal path - Audionet Link in-/output to remote control Audionet devices
Options	- Audionet EPS G2

Errors and omissions excepted. Specifications and design are subject to changes without prior notice.

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Engineered and produced by:
Idektron GmbH & Co. KG, Herner Str. 299, Gebäude 6, 44809 Bochum, Germany
www.audionet.de
kontakt@audionet.de